

**A COMPARATIVE STUDY ON THE NPA OF BANKS  
AND THEIR PROFITABILITY WITH REFERENCE TO  
AXIS BANK AND HDFCBANK**

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**ABSTRACT**

*The Indian economy utmost relies on the financial sector for development of nation. For the banking sector to boom, measuring and keeping the asset management of banks is necessary. The asset quality is constantly decreasing which leads to an intolerable amount of stress on the banking sector, authorities, and the Indian economy. Studying the amount of Non-Performing Assets and how it make an impact on the profitability of the banks is the main goal of the current research. The study took into account the Gross NPA and Net NPA of two Private sector banks, namely Axis Bank and HDFC Bank between 2016 and 2022 for this reason. A Proper plan for collection of interest and get back of advances will lead to the better management of NPA. The data shows little higher percentage of doubtful and bad assets. So the banks should take proper measures for client verification and improved technical analysis for advancing to bring down the NPAs of banks.*

**KEYWORDS:** NPA, Gross NPA, Net NPA, ROA, Axis Bank, HDFC Bank

**INTRODUCTION**

The Indian economy relished a boom in the 2000s. Firms as well as corporations have taken large loans from Indian banks to finance the project. The bank funded many activities in the infrastructure and energy divisions that later became unprofitable owing to rising costs and the aftermath of his 2008 recession. All of this led to deterioration in the balance sheets of banks that expanded their NPAs by 2013.

Cases of willful default worth thousands of rupees came to light when the RBI began clearing bank books. This was when banks' negligence in assessing creditworthiness and corruption in some cases came to light.

All these factors have increased Indian banks' NPAs, nearly 2x times by 2021.

### **STATEMENT OF PROBLEM:**

The problem of non-performing assets is widely discussed around the globe. The Non Performing Assets dilemma is crippling not just the banks, but the nation's entire wealth. In fact, the NPA for the private sector banks in India are nothing but a reflection of the health of trade and commerce.

### **NEED OF THE STUDY**

There are enough study and survey conducted by scholars across the globe at different levels to assess the effects of NPAs and Nationalized Banks as a whole. However there are few studies attempted to know how the effect of Non Performing Assets was made in the profitability of Private Sector Banks.

### **SCOPE OF THE STUDY:**

The research is conducted to understand the effect of Non Performing Assets with respect to profitability of Private Sector Banks with special reference to Axis Bank and HDFC Bank to widen the scope of study of Non Performing Assets examine the effect of operational capability, liquidity, solvency, business development capacity, profitability and capital adequacy on NPAs using the sample from the above mentioned financial institutions such as Axis Bank and HDFC bank.

### **OBJECTIVES:**

1. To compute the comparative position of Non Performing Assets in Axis Bank and HDFC Bank
2. To determine the variation in operational capabilities and profitability ratios in Axis Bank and HDFC Bank.
3. To examine the relationship between the gross Non Performing Asset and profit after tax of Axisbank and HDFC bank.
4. To evaluate the differences between the variances of Provision for NPA and Provision for Standard Assets of Axis Bank and HDFC Bank.

## **RESEARCH DESIGN**

This is an empirical and analytical study pertaining to the secondary data collected from the financial reports of the chosen financial institutions such as Axis Bank and HDFC Bank, RBI explanatory notes, Articles, textbooks, published and unpublished documents related to the study.

## **DATA COLLECTION**

Secondary data techniques are adopted in the research. The facts and data have been acquired from financial reports of the chosen private sector banks such as Axis Bank and HDFC Bank. The data is drawn from company's annual statements, balance sheet, profit and loss statements, notes to balance sheet, bank's quarterly results, disclosures to RBI ,etc., The ratios were extracted from the highlights given in bank's integrated reports.

## **STUDY PERIOD CONSIDERED FOR RESEARCH PURPOSE:**

Non Performing Assets peaked in 2015, largely due to loans initiated during the growth period of 2003-2008 .The new NPA came in the Infrastructure Sector (Energy, Transport and Telecommunications). Therefore the period after the rise in Non Performing Assets between 2016 and 2022 is considered for the study.

## **STATISTICAL TOOLS USED:**

The following are the statistical tools used in the study

1. Percentage Analysis
2. Ratio Analysis
3. Correlation
4. F test

## **LIMITATIONS OF THE STUDY:**

1. The Number of years selected for the experiment is restricted to six years.
2. The research has covered only banks which are operating in India.

## **REVIEW OF LITERATURE:**

M Valliammal and SK Manivannan (2018) in their study titled “ A Study on Non-Performing Assets and Its Impact on Public Sector Banks in India” had the objective to find out the profitability and Non Performing Assets on nationalized banks as well as the relationship between them. The study made use of secondary data from bank’s annual statement to arrive at the profitability. The researcher has selected a few public sector banks were selected for the research. The study scrutinized the trends of profits across different banks over a 7 year time period to assess those top performers and worst performers with regard to the bank’s net profit. There was a significant level of impact in the profitability due to Non Performing Assets from the investigation.

Chetan Dudhe (2017) organized a study on “ Impact of Non-Performing Assets on the profitability of the banks- A selective Study” among Seven Public sector banks viz. State Bank of India, Bank of India, United Bank of India, Bank of Baroda, Indian Overseas Bank, Punjab National Bank and Central Bank of India. The research specifically pointed out the strategies adhered by the above said banks to handle the non-performing assets. This research also suggested a multi-pronged policy for quick recovery of Non Performing Assets. The research covered the bank performance and the net performing assets for the period during 2007-2016. The study made use of secondary data for the data analysis. It was also indicated that all the banks except Punjab National Bank and State Bank of India have a negative correlation between their gross NPAs and profit of the banks. The data for the research were extracted from Reserve Bank of India bulletins and statistical tables relating to financial institutions in Indian economy. The analysis used in the research were correlation and regression which were done by using ms- excel and data representation techniques. It was also concluded that only Punjab National Bank and SBI could achieve profits persistently in the selected years.

Bratati Gupta (2012) conducted a study titled “A Comparative Study of Non-Performing Assets of SBI & Associates & Other Public Sector Banks” strived to acknowledge the perception of Non Performing Assets, its magnitude and main sources for rising NPAs. The study made use of secondary data which was collected using official report of RBI publication including tendency and improvement of banking in the nation, quantitative data related to banks in the country and report on currency and finance in India. The study was limited to Public Sector Banks in India and the period considered for research is restricted to 5 years i.e., from 2007 to 2011. The study made use of

various quantitative tools and techniques such as Averages, ratio analysis, percentages, frequency distribution, Measure of central tendencies, coefficient of variation, ANOVA and standard deviations, test for scrutinizing and interpreting the data. It was also found that there was a marginal decrease in NPAs level of State Bank of India and further Public sector banks in India. The research also recommended all banks to maintain its own independence credit rating agency and to conduct special examination and audit of all business transactions and accounts.

Goyal Kanika (2010) carried out a research on “Empirical study of non-performing assets management of Indian public sector banks” and made an analytical study about NPAs at PSBs in India. The study was based on secondary reports such as Report on tendency and improvement of Banking in the nation and Report on Finance and Currencies. The scope of the research was restricted to an examination of public sector banking Non Performing Assets from March 2002 to September 2008. The study examined NPA trends, asset quality, condition of some loan asset, Departmental Police Agency, etc. Data were analyzed using quantitative tools viz. descriptive statistics, regression analysis, correlation, post hoc Tukey HSD method and one-way ANOVA. The study remarked that both Gross and Net NPA has been increased, improving bank asset management. public banks properly managed their assets. However, the study distinguished that the rise in Non Performing Assets in the agricultural industry is of great concern

## DATA ANALYSIS

### AXIS BANK

**Table 1 : Amount of Net Profit and percentage change with respect to precious year in Axis bank**

<b>Year</b>	<b>Net profit (Amount in crores)</b>	<b>% Change in Profit</b>
2016-2017	3,679.28	-----
2017-2018	275.68	-92.5
2018-2019	4,676.61	1596.39
2019-2020	1,627.22	-65.2
2020-2021	6,588.50	304.89
2021-2022	13,025.48	97.7

Source : Secondary data

## INTERPRETATION

The above table reveals that Axis bank had a drastic decline in the Net Profit by -92.5% in the year 2017-2018 . There is a sudden drastic rise over the net profit of Axis Bank during the period 2018-19 by 1596.39% due to their execution strategy. During the period 2019-20 there was a decline in the profit by 65.2% whereas on the contrary the net profit of the bank increased by 304.89%. In the recent period 2021-22 the net profit rate of Axis bank fell to 97.7%.

**NET PROFITS/LOSSES FOR THE FOLLOWING YEARS:AMOUNT  
(IN CRORES)**

**HDFC Bank**

<b>Table 2 : Amount of Net Profit and percentage change with respect to precious year in HDFC bank</b>		
<b>Year</b>	<b>Net profit (Amount in crores)</b>	<b>% Change in Profit</b>
2016-2017	14,549.64	-----
2017-2018	17,486.73	20.18
2018-2019	21,078.17	20.538
2019-2020	26,257.32	24.57
2020-2021	31,116.53	18.5
2021-2022	36,961.36	18.78

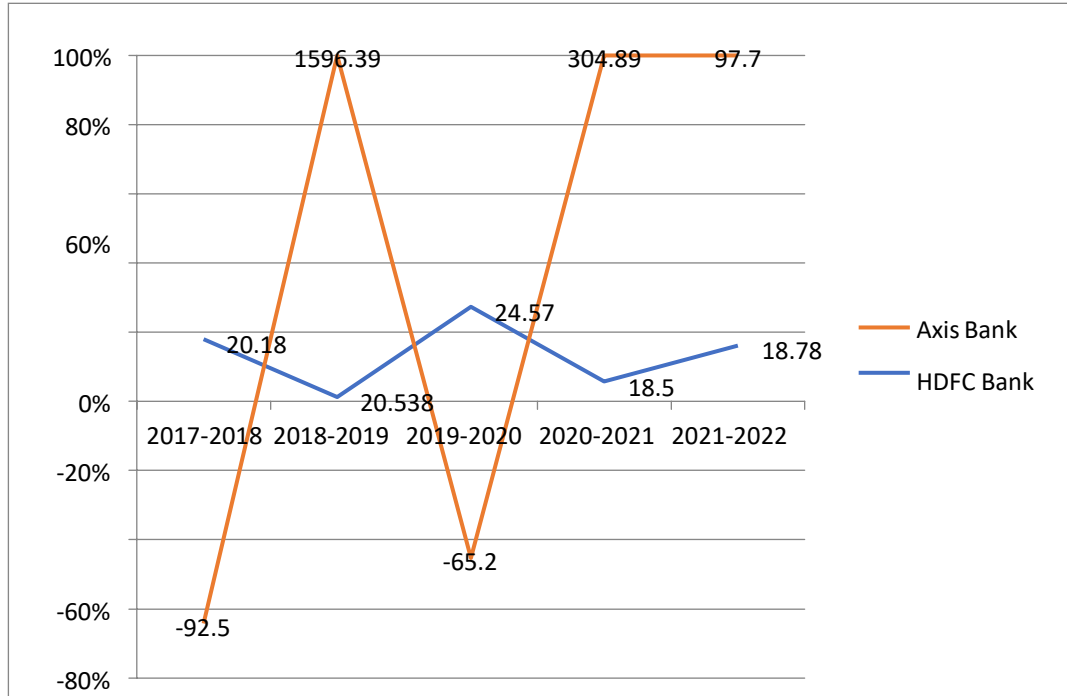
Source : Secondary data

**INTERPRETATION:**

The above table reveals that there had been an increase in the profits of HDFC bank from the year 2016-17 to 2017-18 and had increased by 20.18%. The following year exhibits a significant rise in the profits and it rises to 20.538%. The period 2019-20 shows a notable increase in the amount of Net Profit Of HDFC bank as it soars to a high of 24.57%. During the period 2020-21 there is a consequent rise I the profit by 18.5% whereas the subsequent year 2021-22also indicates a increase in the profit of 18.78%.

The above table aids to conclude that the Non Performing Assets management is better in HDFC Bank than Axis Bank.

**Chart 1 : Change in Profit between Axis Bank and HDFC Bank**



Source: Secondary data

## **CORRELATION BETWEEN GROSS NPA AND PROFIT AFTER TAX OF AXIS BANK**

### **STATEMENT OF HYPOTHESIS:**

H0: There is no significant relationship between the gross Non Performing Asset and profit after tax of Axis bank.

H1: There is a significant relationship between the gross Non Performing Asset and profit after tax of Axis bank.



<b>YEAR</b>	<b>GROSS NPA</b>	<b>PROFIT AFTER TAX</b>
2016-17	21280.48	3,679.28
2017-18	34248.64	276
2018-19	29789.44	4,676.61
2019-20	30233.84	1,627.22
2020-21	25314.84	6,588.50
2021-22	20110	13025

Source: Secondary data

The research examines the relationship between Gross Non Performing Assets on the profitability of private sectors namely, Axis bank for the period covering 2016-17 to 2021-22.

The below table conveys the correlation of Gross non performing assets and Profitability (After Tax) of Axis Bank

### Correlation

		<b>GROSS NPA</b>	<b>PROFIT AFTER TAX</b>
<b>GROSS NPA</b>	Pearson Correlation	1	-.769
	Sig. (2-tailed)		.074
	N	6	6
<b>PROFIT AFTER TAX</b>	Pearson Correlation	-.769	1
	Sig. (2-tailed)	.074	
	N	6	6

Source : Secondary data

It is notable that there appears a strong negative correlation between gross Non Performing Assets and Profit after Tax of Axis bank. The relationship is as high as -0.769

## **CORRELATION BETWEEN GROSS NPA AND PROFIT AFTER TAX OF HDFC BANK**

### **STATEMENT OF HYPOTHESIS:**

H0: There is no significant relationship between the gross Non Performing Asset and profit after tax of HDFC bank.

H1: There is a significant relationship between the gross Non Performing Asset and profit after tax of HDFC bank.

<b>Table 5: Amount of Gross NPA and Profit after tax of HDFC bank (Amount given in crores)</b>		
<b>YEAR</b>	<b>GROSS NPA</b>	<b>PROFIT AFTER TAX</b>
2016-17	5885.66	14,550
2017-18	8608.97	17,487
2018-19	11224.16	21,078
2019-20	12649.97	26,257
2020-21	15086	31,117
2021-22	16140.96	36,961

Source : Secondary data

The study examines the relationship between Gross Non Performing Assets on the profitability of private sectors namely, HDFC bank for the period covering 2016-17 to 2021- 22.

The below table exhibits the correlation of Gross NPA with respect to Profitability (After Tax) of HDFC Bank

<b>Table 6: correlation for the relationship between gross NPA and Profit after Tax of HDFC bank (Amount in crores)</b>			
		GROSS NPA	Profit after Tax
GROSS NPA	Pearson Correlation	1	.971**
	Sig. (2-tailed)		.001
	N	6	6
Profit after Tax	Pearson Correlation	.971**	1
	Sig. (2-tailed)	.001	
	N	6	6

\*\* . Correlation is significant at the 0.01 level (2-tailed).Source : Secondary data

It conveys that it exists a weekly positive correlation between Gross NPA and Profit after Tax. We can say that Gross NPA have a direct effect on the profit. The relationship is as high as 0.9

## F TEST

### PROVISION FOR STANDARD ASSETS

#### Statement of Hypothesis:

$H_0$  : There is no significant differences between the variances of Provision for Standard Assets of Axis Bank and HDFC Bank

$H_1$  : There is a significant differences between the variances of Provision for Standard Assets of Axis Bank and HDFC Bank

## PROVISION FOR STANDARD ASSETS

<b>Table7: F Test for differences between the variances of Provision for Standard assets of Axis bank and HDFC bank (Amount in crores)</b>						
YEAR	AXIS BANK	Deviationd (Axis Bank)	d <sup>2</sup>	HDFC BANK	Deviation (HDFC Bank)	d <sup>2</sup>
2016-2017	364.34	-501.4566667	251458.7886	431.23	-354.5666667	125717.5211
2017-2018	-124.37	-990.1666667	980430.0278	657.58	-128.2166667	16439.51362
2018-2019	814.31	-51.48666667	2650.876845	686.14	-99.66	9932.1156
2019-2020	1534.16	668.36	446705.0896	800.58	14.78333333	218.5469443
2020-2021	2390.72	1,524.92	2325381.006	875.22	89.42333333	7996.532544
2021-2022	215.62	-650.1766667	422729.6979	1,264.03	478.23	228703.9329
$\sum x$	5194.78		4429355.487	4714.78		389008.1627
$\bar{x}$	865.7966667			785.7966667		

$$s_1^2 = \sum d_1^2 / n_1$$

$$= 738225.9145$$

$$s_2^2 = \sum d_2^2 / n_2$$

$$= 64834.69379$$

$$S_1^2 = n_1 s_1^2 / n_1 - 1$$

$$= 885871.0974$$

$$S_2^2 = n_2 s_2^2 / n_2 - 1$$
$$= 77801.63255$$

$$F = S_1^2 / S_2^2$$
$$= 11.38627903$$

Table Value of F at 5% level of significance for (5,5) degrees for freedom = 5.05

$H_0$  is rejected and  $H_1$  is accepted since the calculated value of  $F(11.38627903) >$  the table value of  $F(5.05)$ .

There is a significant difference between the variances of Provisions for Standard Assets of Axis bank and HDFC bank.

Since both the banks have varying level of profitability, it is evident that both the selected banks, HDFC Bank and Axis Bank would have varying doubtful and bad loan assets. Thus the Provision for Standard Assets will depend on a percentage from the outstanding doubtful assets. Hence there is significant differences between the variances of Provisions created for Standard Assets

## CONCLUSION

The study evaluates the effect of NPAs on the profitability performance of Private Sector Banks which covers the period of 2016 to 2022. The study focused on the role of factors which fluctuates the profitability of Private Sector Banks. Every factors discussed in the study describes and explains the issue of Non Performing Assets. The analysis of data is based upon correlation, F test, t test and Analysis of Variance. One may include more banks along with chosen Private Sector Banks also to increase the scope of the study. Since for any public or private sector bank, Non Performing Assets is inevitable. But the banks could develop their strategies in recovery management, proper credit appraisal and selection criteria of clients and monitorization will reduce the extent of NPA. The result concludes that the ratios and factors influencing the profitability of selected Private Sector Banks are different in terms of operational capabilities and growth. The HDFC Bank is steadily

improving and showing progress whereas Axis Bank is vibrant and consists of a dynamic nature. Axis Bank shows a revamped profitability in recent years to earlier years whereas HDFC Bank shows a constant and stable growth in their overall profitability and NPA management. Thus an investor who likes to take risk and have speculative motive can choose Axis Bank as it enhances its assets and loans management efficiently in recent years due to their newly formed execution strategy and a risk averse who prefer a stable return at a low risk could go for HDFC Bank.

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